



OFFICE OF
**INSPECTOR
GENERAL**
UNITED STATES POSTAL SERVICE

Standardization of Integrated Mail Handling System Loaders at Network Distribution Centers

Audit Report

February 28, 2012

Report Number NL-AR-12-002



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HIGHLIGHTS

February 28, 2012

Standardization of Integrated Mail Handling System Loaders at Network Distribution Centers

Report Number NL-AR-12-002

IMPACT ON:

Network Operations – the Network Distribution Center (NDC) Operations and Network Operations Engineering groups.

WHY THE OIG DID THE AUDIT:

Our objective was to assess the level of standardization of selected mail processing equipment - Integrated Mail Handling System (IMHS) loaders within the NDC network.

WHAT THE OIG FOUND:

We determined that some of the IMHS loaders used at the NDCs had not been standardized. Only 247 of the 524 IMHS loaders had been modified to accommodate both Postal Paks and over-the-road (OTR) containers. The remaining 277 unmodified IMHS loaders can only safely accommodate Postal Paks. This occurred because U.S. Postal Service Headquarters had not mandated modification of the IMHS loaders. Once the IMHS loaders are modified, the Postal Service would attain consistent use of the equipment in the NDC network and be able to improve the flow and redistribution of OTR containers. This will also reduce cardboard purchases and avoid unnecessary transportation of empty OTR containers. Finally, since we determined that some NDCs were using OTR containers on unmodified IMHS loaders, modifying them would eliminate a safety hazard to employees.

WHAT THE OIG RECOMMENDED:

We recommended the vice president, Network Operations, direct NDCs to modify IMHS loaders to safely accept OTR containers, while continuing to accept Postal Paks, as designed. We also recommended the vice president ensure that NDCs do not use OTR containers in their IMHS loaders until the loaders are modified to safely accommodate OTR containers.

WHAT MANAGEMENT SAID:

Management agreed with both recommendations and will issue a work order to implement modification of the local equipment loaders along with the necessary changes to other documents and procedures. In addition, managers at each of the 10 affected NDC sites have been directed to refrain from using OTR containers in the IMHS loaders until the necessary modifications have been made.

AUDITORS' COMMENTS:

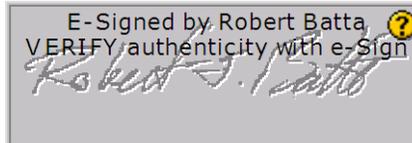
The U.S. Postal Service Office of Inspector General considers management's comments responsive to the recommendations and corrective actions should resolve the issues identified in the report.

[Link to review the entire report](#)



February 28, 2012

MEMORANDUM FOR: DAVID E. WILLIAMS, JR.
VICE PRESIDENT, NETWORK OPERATIONS



FROM: Robert J. Batta
Deputy Assistant Inspector General
for Mission Operations

SUBJECT: Audit Report – Standardization of Integrated Mail
Handling System Loaders at Network Distribution Centers
(Report Number NL-AR-12-002)

This report presents the results of our nationwide audit of the Standardization of Integrated Mail Handling System Loaders at Network Distribution Centers (Project Number 10XG052NL001).

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Jody Troxclair, director, Transportation, or me at 703-248-2100.

Attachments

cc: Susan M. Brownell
Cynthia F. Mallonee
Frank Neri
John M. Dunlop
Cathy L. Moon
Susan A. Witt
Corporate Audit and Response Management

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Introduction

This report presents the results of our nationwide audit of Integrated Mail Handling System (IMHS) loaders at network distribution centers (NDCs) (Project Number 10XG052NL001). This self-initiated audit addresses strategic and operational risks. Our objective was to assess the level of standardization¹ of selected mail processing equipment (MPE) – IMHS loaders within the NDC network.² See [Appendix A](#) for additional information about this audit.

The IMHS is a heavy mechanical material handling system, which consists of loaders, unloaders, and conveyers. The U.S. Postal Service has used the IMHS to containerize mail going to and from the NDC network. This report focuses on standardization of the IMHS loader,³ which was initially designed to accommodate large cardboard containers, referred to as Postal Paks,⁴ but can also be modified to safely accommodate OTR containers.⁵ We found that the Postal Service has 524 IMHS loaders in use at 16 of the 21 NDCs.⁶

Mail transport equipment (MTE) also plays a vital role in holding mail for transportation and distribution purposes for the Postal Service’s NDC network. MTE are containers of various types, including containers with wheels of varied sizes, shapes, and materials (known as “rolling stock”), which are primarily used internally to move mail within or between Postal Service facilities. The Postal Service also uses cardboard containers of various width and height, including Postal Paks, to supplement its inventory of MTE rolling stock.

¹ Standardization is the implementation of rules and specifications for common and repeated use, aimed at achieving an optimum degree of order or uniformity. The U.S. Postal Service Office of Inspector General (OIG) is conducting a series of audits looking at standardization within all Postal Service functions, including standardization of equipment.

² We modified the audit objective in the original announcement letter. Our initial objective was to assess the level of standardization of selected MPE and MTE in the NDCs network. Due to the limited audit focus on the standardization of IMHS loaders, the audit objective was restated for that focus.

³ The IMHS consists of both loaders and unloaders. IMHS loaders directly affect the NDCs’ ability to comply with the NDC over-the-road (OTR) matrix. Additionally, the Postal Service has initiatives in place to refurbish or modify many NDC IMHS unloaders. As such, the focus of this audit is the IMHS loader only.

⁴ Postal Paks are rigid 69-inch high tri-wall fiberboard boxes used on specific MPE exclusively within the NDC network, which are funded by Postal Service Headquarters for budgetary purposes.

⁵ OTR is a container on wheels, constructed of heavy gauge metal and used for transporting surface mail by truck or rail between an NDC and its associate Postal Service facilities.

⁶ The NDC implementation, which includes additional processing requirements for some NDCs, caused five NDCs to have a limited need and limited space for IMHS loaders for mail processing to intra-NDCs. These five NDCs (Chicago, Detroit, Kansas City, Philadelphia, and St. Louis) have incorporated this processing to other machines, such as the Automated Package Processing System and Automated Container Loaders therefore, requiring no IMHS loaders.

Conclusion

We determined that 277 IMHS loaders (53 percent) used at the NDCs had not been standardized to safely accommodate OTR⁷ containers, which led some facilities to primarily use Postal Paks. If these loaders were modified for OTR containers, the Postal Service would attain consistent use of the equipment in the NDC network, be able to improve the flow and re-distribution of OTR containers, reduce cardboard purchases, and avoid unnecessary transportation of empty OTR containers. We also determined that some NDCs were improperly using OTR containers on unmodified IMHS loaders, causing a potential safety hazard, which may subject the Postal Service to fines estimated at \$30,000. See [Appendix B](#) for details on the potential impact of this issue.

Standardization of IMHS Loaders

We found that 247 of the 524 IMHS loaders had been modified to accommodate both Postal Paks and OTR containers, while the remaining 277 could only safely accommodate Postal Paks. This limited the Postal Service to primarily using Postal Paks, rather than OTR containers at many facilities. See [Appendix C](#) for a list of IMHS loaders by NDC.

This occurred because Postal Service Headquarters had not mandated modification of the IMHS loaders. In our discussions with NDC management, we were advised of several different ways to modify the IMHS loaders to safely accept OTR containers. The most common way to do this is to remove the rear bumpers as shown in photograph 1 to the right below.⁸ This would allow the mail to fit deeper in the loader. Regardless of the method of conversion, the cost of labor and parts would be less than \$100,000 for all conversions.

Photograph 1 – Unmodified and Modified IMHS Loader



**IMHS Loaders before modification (on the left) and after modification (on the right).
The picture on the right shows the bumpers in the rear were removed
to safely accommodate both Postal Paks and OTR containers.
Cincinnati NDC - August 30, 2011.**

⁷ While the NDC network uses all types of rolling stock, the OTR container is a type of MTE primarily used in the NDC network. OTR containers are large aluminum containers on wheels designed for use with automatic container loaders and unloaders for the safe and mechanized unloading of bulk items.

⁸ No NDC reported any negative effects or increased damage to the IMHS loaders as a result of removing the rear bumpers.

We also determined in interviews with officials at the Los Angeles NDC that the Occupational Safety and Health Administration (OSHA) levied a penalty of \$3,000 in March 2011 for using OTR containers in an unmodified IMHS loader when there was a shortage of Postal Paks at the facility. Furthermore, we found the Atlanta, GA, Des Moines, IA, and Washington, DC NDCs were using OTR containers in unmodified IMHS loaders, causing a safety hazard.

**Photograph 2 – Modified IMHS Loader
Accepting both Postal Paks and OTR Containers**



IMHS loaders shown with Postal Paks as designed and modified for an OTR container that fits securely into the loader cradle. Cincinnati NDC – August 30, 2011.

Officials at these NDCs told us that modifications were not necessary since the loaders as designed can already accept both the Postal Pak and the OTR container. However, although both types of MTE can be placed in the loader, mail handlers were not able to securely and safely position the OTR container in the loader cradle as the OTR container extended 6 to 8 inches outside the loader's cradle, creating a safety hazard. As a result, the OTR container could roll away from the container loader at any time without notice. Additionally, sensors for the loaders were not adjusted for the height difference between the Postal Paks and the OTR containers, meaning that overloading could occur and cause unsafe conditions similar to those experienced at the Los Angeles NDC.

The Postal Service is required to provide a safe and healthy workplace, free of recognized hazards and in compliance with OSHA standards. We estimate that if unmodified IMHS loaders are being used, the Postal Service may be at risk of incurring OSHA fines of approximately \$30,000. See [Appendix B](#) for detailed calculations.

In addition to avoiding a safety hazard, there are several benefits to modifying IMHS loaders, such as:

- Increasing operational flexibility — modification of IMHS loaders would provide NDCs with increased flexibility and the option to facilitate use of both OTR containers and Postal Paks based on availability of the MTE.

- Facilitating NDC compliance with the headquarters-mandated OTR matrix — modification of IMHS loaders to safely accept OTR containers would facilitate NDC compliance with the NDC OTR matrix by enabling NDCs to safely use OTR containers to transport mail and redistribute the containers using existing transportation. This would also help the Postal Service:
 - Reduce the number of OTR containers at surplus NDC sites.
 - Minimize the purchase and use of cardboard and Postal Paks.
 - Avoid additional transportation cost to move empty OTR containers.

Overall, we believe the benefits of standardizing IMHS loaders will provide effective and enhanced management of MTE and outweigh the cost of modifying IMHS loaders.⁹

Recommendations

We recommend the vice president, Network Operations:

1. Direct network distribution centers to modify Integrated Mail Handling System loaders to safely accept over-the-road containers, while continuing to accept Postal Paks, as designed.
2. Ensure that network distribution centers do not use over-the-road (OTR) containers in their Integrated Mail Handling System loaders until the loaders are modified to safely accommodate OTR containers to avoid potential safety hazards.

Management's Comments

Management agreed with the two recommendations in the report. Specifically, management stated that:

- It will develop and issue a work order to implement modification of the local equipment loaders, along with the necessary changes to other documents and procedures. All modifications are expected to be completed by July 24, 2012.
- Managers at each of the designated NDC sites have been directed to refrain from using OTR containers in the IMHS loaders until modifications have been made to support the use of the OTR containers. Additionally, the NDC managers at these locations have been tasked with communicating to their employees the requirements to only use Postal Paks until the loaders have been modified. The communication action plan was completed on February 6, 2012. See [Appendix D](#) for management's comments in their entirety.

⁹ The cost to standardize the remaining IMHS loaders in the NDC network in parts and staff hours would be less than \$100,000 nationally.

Evaluation of Management's Comments

The OIG considers management's comments responsive to the recommendations and corrective actions should resolve the issues identified in the report. Regarding recommendation 2, we agree that the communication with the NDC plant managers and employees satisfies the intent of this recommendation. Therefore, recommendation 2 may be closed with the issuance of this final report.

The OIG considers recommendation 1 significant and, therefore, requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective action is completed. This recommendation should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendation can be closed.

Appendix A: Additional Information

Background

Conversion of bulk mail centers to the NDC network was initiated to improve the flow of mail, consolidate package distribution, and improve transportation utilization. In addition, the conversion resulted in the NDCs assuming more processing activities and using various types of MPE. The IMHS loader is one of the primary types of MPE that NDCs use to process parcels and sacks.

One type of MTE used primarily in the NDC network is the OTR container. It is designed to move bulk business mail and Parcel Post[®] mail within and among NDCs and other facilities. To assist with tracking and redistributing OTR containers in the NDC network, the Postal Service established the NDC OTR matrix as a tool to achieve a balance of OTR containers within the NDC network. Furthermore, the NDC OTR matrix serves to identify NDCs with excess OTR containers and facilitate redistribution to those NDCs experiencing OTR container shortages. The IMHS loaders directly impact the NDCs' ability to comply with the NDC OTR matrix since not all OTR containers can be used in the IMHS loaders.

Objective, Scope, and Methodology

Our objective was to assess the level of standardization of selected MPE-IMHS loaders in the NDC network. To accomplish our objective, we assessed standardization of the IMHS loaders, a type of MPE, which NDCs use to process intra-NDC mail for dispatch. For this audit, we focused on IMHS loaders, but excluded IMHS unloaders because many NDCs have ongoing initiatives to refurbish or modify their unloaders. This review is a follow-up of our previous audit, *Mail Transport Equipment – Needs, Distribution and Use* (see [Prior Audits](#)), which addressed the imbalance of MTE rolling stock, particularly the use and distribution of OTR containers in the NDC network.

We conducted interviews with representatives from headquarters' Network Operations including NDC Operations and Network Operations Engineering groups. We visited five NDCs and held telephone discussions with the remaining 16. We conducted interviews with the plant, in-plant support and maintenance personnel, and transportation managers encompassing all 21 NDCs to understand IMHS loaders within the NDC network. We assessed the number of NDCs that modified the IMHS loaders to safely accept OTR containers as of December 6, 2011; and national MTE policies and procedures, NDC planning documents, NDC OTR matrices, and other documents relating to OTR containers and IMHS loaders.

We conducted this performance audit from June 2011 through February 2012 in accordance with generally accepted government auditing standards and included such tests of internal controls, as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our

audit objective. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We discussed our observations and conclusions with management on January 18, 2012, and included their comments where appropriate.

Prior Audit Coverage

As reflected in the table below, the OIG has issued two prior audit reports addressing the management of OTR containers in the NDC network and standardization of MPE.

Report Title	Report Number	Final Report Date	Monetary Impact	Report Results
<i>Standardization of Mail Processing Equipment at Processing and Distribution Centers</i>	NO-AR-12-001	10/4/2011	None	The Postal Service has a sufficient number of machines available to process the mail at processing and distribution centers and has achieved considerable standardization of equipment at the facilities reviewed. This report focused on standardization of the Automated Flat Sorting Machine 100 and Delivery Bar Code Sorter machines. Opportunities for further standardization existed at some facilities. Management agreed with the recommendations.
<i>Mail Transport Equipment – Needs, Distribution and Use</i>	NL-AR-11-006	9/23/11	None	Postal Service Headquarters did not perform a comprehensive MTE rolling stock needs analysis or establish effective processes to manage, control, and redistribute existing MTE rolling stock in the NDC network. Management agreed with our findings and recommendations.

Appendix B: Other Impacts

Finding	Impact Category	Amount
Standardization of IMHS Loaders - Safety Concerns	Assets at Risk ¹⁰	\$30,000 ¹¹
Standardization of IMHS Loaders - Safety Concerns	Physical Safety and Security ¹²	\$0

The Postal Service may be at risk of incurring OSHA fines of approximately \$30,000, or \$3,000 for each of the 10 NDCs, which have not modified their IMHS loaders to safely accommodate OTR containers (see [Appendix C](#)).

¹⁰ Assets at risk are financial assets that are at risk of loss because of inadequate internal controls and potential OSHA penalties.

¹¹ The "Assets at Risk" calculation was determined based on the \$3,000 fine for prior OSHA penalty multiplied by 10, which is the number of NDCs with loaders yet to be modified nationally that could potentially use OTR containers in these unmodified IMHS loaders, thereby presenting unsafe conditions.

¹² Physical safety and security cover physical operations assets (such as IMHS loaders) that are unsafe because of inadequate safety practices and the safety and security of Postal Service employees.

Appendix C: IMHS Loaders by NDC

NDC	Total IMHS Loaders in Use	Modified IMHS Loaders	Unmodified IMHS Loaders
<u>NDCs with Fully Modified IMHS Loaders</u>			
Cincinnati, OH	24	24	0
Denver, CO	20	20	0
Jacksonville, FL	22	22	0
Memphis, TN	41	41	0
Minneapolis/St. Paul, MN	18	18	0
Springfield, MA	24	24	0
Sub-Total	149	149	0
<u>NDCs with Some or No Modified IMHS Loaders</u>			
Atlanta ,GA	6	0	6
Dallas, TX	41	0	41
Des Moines, IA	51	0	51
Greensboro, NC	65	22	43
Los Angeles, CA	36	0	36
New Jersey	53	51	2
Pittsburgh, PA	42	12	30
San Francisco, CA	28	4	24
Seattle, WA	32	9	23
Washington, DC	21	0	21
Total	524	247	277

Appendix D: Management's Comments

DAVID E. WILLIAMS
VICE PRESIDENT, NETWORK OPERATIONS



February 16, 2012

SHIRIAN B. HOLLAND

SUBJECT: Draft Audit Report – Standardization of Integrated Mail Handling Systems
Loaders at Network Distribution Centers (Report Number NL-AR-12-DRAFT)

We have reviewed the audit performed by the Office of Inspector General on the standardization of IMHS loaders in Network Distribution Centers. Thank you for the opportunity to review and comment on the draft audit report. Management agrees with each of the recommendations and will address each separately below.

Recommendation 1:

Direct network distribution centers to modify Integrated Mail Handling System loaders to safely accept over-the-road containers (OTR), while continuing to accept Postal Paks, as designed.

Management Response/Action Plan:

Management agrees with the recommendation. Headquarters Maintenance Operations will develop and issue a Modification Work Order (MWO), to implement a modification on the local equipment loaders, along with the necessary changes to other documents and procedures. The MTSC will distribute the MWO to the ten (10) sites listed in [table 1], identifying the specific Integrated Mail Handling container loaders that require modification. Headquarters Maintenance Operations will monitor and track completion of the unmodified loaders to ensure the MWO has been fully completed.

Target Completion Date:

July 24, 2012

Responsible Official:

George Coupar, Manager Material Handling Engineering

Recommendation 2:

Ensure that network distribution centers do not use over-the-road (OTR) containers in their Integrated Mail System loaders until the loaders are modified to safely accommodate OTR containers to avoid potential safety hazards.

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Management Response/Action Plan:

Management agrees with the recommendation. The managers at each of the sites listed in [table 1] have been directed to refrain from utilizing over-the-road (OTR) containers in the containers loaders until the modification has been made to support the use of the container in the modified loaders. Additionally, the NDC managers at these locations have been tasked with communicating the restriction to their employees on the requirements to only utilize Postal Paks until the loaders have been modified.

Target Completion Date:

February 6, 2012

Responsible Official:

Terry R. Morrow, Manager N&LDC Operations (A)



David E. Williams

cc: Sally K. Haring, Corporate Audit and Response Management
Frank Neri, Processing Operations

[Table 1]

NDC	Total IMHS Loaders in Use	Modified IMHS Loaders	Unmodified IMHS Loaders
NDCs with Some or No Modified IMHS Loaders			
Atlanta, GA	6	0	6
Dallas, TX	41	0	41
Des Moines, IA	51	0	51
Greensboro, NC	65	22	43
Los Angeles, CA	36	0	36
New Jersey	53	51	2
Pittsburgh, PA	42	12	30
San Francisco, CA	29	4	24
Seattle, WA	32	9	23
Washington, DC	21	0	21
Total	524	247	277